to the water fowl, and 175 species are recorded. Considerable space is given to insects and the lower forms of animal life, and especially to those which are of value to the fish fauna of the lake.

The larger part of the second volume is devoted to the flora of Lake Maxinkuckee and its vicinity. This includes a special chapter on the aquatic flora and its uses, and a chapter on the algae, of which 76 species are mentioned. The volume closes with an annotated list of the ferns, fern allies, and seed-bearing plants found in the lake and the surrounding basins, of which 838 species are listed. The arrangement and nomenclature is that of the second edition of BRITTON and BROWN'S *Illustrated Flora*. The remarks about the various plants are very readable, while some of the observations are quite unique and have heretofore been unrecorded.

Besides the scientific value of the monograph, its important educational value should not be overlooked. Dr. EVERMANN, the senior author, although now a well known scientist, was originally a teacher in our elementary schools, and the educational importance of scientific research has always been emphasized by him. This book should be made a most helpful guide to the science teachers in our high schools and colleges who wish to do field work. It forms a model for the study of the lake or river valley or even the pond or creek in one's own locality. If the science teachers in the ninety-two counties of Indiana alone should use it with their classes in the study of local problems, a mass of information about the state would be accumulated, and a wonderful interest in nature study would be developed.—J. N. ROSE.

NOTES FOR STUDENTS

Taxonomic notes.—The vascular plants collected by the Canadian Arctic Expedition of 1913–18 on the Arctic coast west of the 100th meridian have been published by MACOUN and HOLM,[3] the latter completing the determinations after the death of MACOUN. There have also been included three other collections from the same region. The enumeration includes 230 species, Compositae including 23, Gramineae 22, Ranunculaceae 19, Cruciferae and Saxifragaceae each 18, etc. The largest genus represented is *Saxifraga* with 15 species, followed by *Carex*, *Salix*, and *Ranunculus* each with 12 species. Some interesting comparisons are made with the flora of Greenland and of the west coast of Alaska.

EVANS[4] has published a detailed study of the liverwort genus *Riccardia*, "often known as *Aneura*," as it is represented in Chile. He recognizes 25 species, of which 3 are new and 17 new combinations. The descriptions are very full, so that the presentation is morphological as well as taxonomic.

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[3] MACOUN, JAMES M., and HOLM, THEO., Report of the Canadian Arctic Expedition 1913–18. **5**: Part A. 1–51. *pls. 13.* 1921.

[4] EVANS, A. W., The genus *Riccardia* in Chile. Trans. Conn. Acad. Sci. **25**: 93–209. *figs. 13.* 1921.

SCHLECHTER,[5] in monographing the tribe Thismieae of Burmanniaceae, recognizes ten genera, the following two being new: *Scaphiophora* and *Triurocodon*.

PERKINS,[6] in monographing the African species of *Pycnostachys* (Labiatae), recognizes 33 species, 8 of which are new. The same author has also monographed the African species of *Achyrospermum* (Labiatae), recognizing 12 species, 3 of which are new.

BROWN,[7] in naming a collection of plants from southeastern Congo, Rhodesia, and South Africa, has described 30 new species, and also a new genus (*Alistilus*) of Leguminosae.

DIELS,[8] in continuation of his investigation of the flora of Micronesia, has published the following families: Myrtaceae, Myrsinaceae, Elaeocarpaceae, Asclepiadaceae, Scrophulariaceae, and Gesneraceae.—J. M. C.

Citrus diseases in the Orient.—The study of citrus diseases in the Orient is of particular interest and importance since most of our cultivated citrus fruits undoubtedly had their origin in this region. REINKING'S[9] recent paper therefore, is timely and interesting. A description of the diseases, a discussion of the causal organism, and suggestions regarding the control measures proper for each is given. A summary showing the citrus varieties found in each country, with the diseases to which they are subject, is given, also a list of scale insects and fungi parasitic on scales. Fourteen good plates, devoted chiefly to illustrating citrus canker (*Pseudomonas citri*), bark rot (*Diplodia*), and pink disease (*Corticium salmonicolor*) complete the article. The two latter diseases, occurring in the Philippines and unknown in the United States, are apparently of major importance, warranting every precaution against their spread or introduction into new territory. A "black spot" disease occurring in South China, of unknown cause, is also regarded as serious.

Particular attention is given to the degree of susceptibility to citrus canker shown by different species, hybrids, and relatives of citrus planted out at Los Baños, Philippine Islands. Observations of this character have an important bearing on the selection of material for culture in regions exposed to canker

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[5] SCHLECTER, R., Die Thismieae. Notizblatt Bot. Gart. u. Mus. Berlin-Dahlem. **8**:no. 71. 31–45. 1921.

[6] PERKINS, JANET, Die afrikanischen *Pycnostachys*-Arten. Notizblatt Bot. Gart. u. Mus. Berlin-Dahlem. **8**:no. 71. 63–77. 1921; Die afrikanischen *Achyrospermum*-Arten. *Ibid.* 78–82.

[7] BROWN, N. E., New plants from tropical and South Africa collected by Archdeacon F. A. ROGERS. Kew Bull. 1921:no. 8. 289–301.

[8] DIELS, L., Beiträge zur Flora von Mikronesien und Polynesien. II. Engler's Bot. Jahrb. **56**:529–577. 1921.

[9] REINKING, OTTO A., Citrus diseases of the Philippines, South China, Indo-China, and Siam. Philippine Agriculturist **9**:121–179. 1921.